Modern Water Ethics: Implications for Shared Governance

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ABSTRACT

It has been suggested that water and social values were divorced in modernity. This paper argues otherwise. First, it demonstrates the historical link between ethics and politics using the case of American water governance. It engages theories regarding state-centric water planning under 'high modernism' and the claim that water was seen as a neutral resource that could be objectively governed. By developing an alternate view from the writings of early American water leaders, J.W. Powell and W.J. McGee, the paper offers a way to understand the project of state-centred governance without the claim that water falls to the latter half of a society/nature dualism. Second, the paper reviews how the emerging 'water ethics' discourse helps organise both the ethical and legal norms at play within contemporary political shifts towards decentralised governance. The review identifies how McGee's early influence may warrant more attention, both in terms of water governance and environmental ethics. The paper concludes by arguing that, given the arguments presented, success in decentralising water governance turns not only on political considerations, but also on fairly ordering normative claims as part of fostering and extending the reach of coordinated water governance.

KEYWORDS

Water, ethics, modernity, governance

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INTRODUCTION

Uncelebrated, and virtually unremarked upon, 2009 marked the centennial anniversary of W.J. McGee's (1909) declaration of the now ubiquitous notion that water is a 'resource'. Yet this idea of a 'water resource' is increasingly criticised as emblematic of how modernity eliminated water's social meaning in favour of a rationalised, secularised, materialist and 'disenchanted' perspective (Hamlin, 2000). So understood, 'modern water' is mere H_20, a value-free category constructed through the science of hydrology and which legitimates claims to objectivity in water management despite the multiple social meanings still attached to it (Linton, 2010). This purported neutralisation of water's place-specific properties has been identified by Bakker (2010: 217) as reflecting a modernist logic '...in which the rational, scientific management of resources is able to wreak technical miracles, but not without enacting a degree of ecological and cultural violence'. This paper argues that water – *qua* resource – was not viewed in this way by some key members of American water leadership of the early twentieth century and considers the ethical implications of recent trends towards shared water governance in this light.

The first argument of this paper identifies how historical norms of water governance were not neutral with respect to what water is. Using the American case, it provides historical evidence that describes the philosophical implications of recent trends towards shared water governance through an examination of ideas espoused by some key water policy architects in the United States at the turn of the twentieth century. The US case is significant because it has often been uncritically promoted as the exemplar for educating international water managers (Briscoe, 2010). It therefore carries normative implications for the multiple modernities (cf. Eisenstadt, 2000) of global water governance. At this scale, the 'progress' (Kaika, 2005) and politics (Conca, 2005) of aligning local and regional water governance with global water institutions has frequently led to inequitable outcomes for non-western communities seeking to preserve their distinctive forms of life (Boelens et al., 2010).

The second argument of the paper takes up Nelson's (2003) remarks that water has often been in a 'metaphysical blindspot' for environmental ethicists. Here we deploy our review of the historical philosophy of water management to clarify different approaches to the emerging 'water ethics' discourse, and the normative concerns in contemporary shifts toward decentralised water governance (i.e. Sabatier et al., 2005). And whereas the literature connects material and conceptual contingencies to the uptake of particular values (Ioris, 2012), this paper focuses on how we might consider issues of water and ethics *without* the reputed nature/society distinction argued for in our historical account. With the arguments of both sections in mind, we conclude by considering several implications for decentralised water governance and the ways in which ethics

are becoming an explicit part of the public–private–community partnerships that characterise transitions toward shared water governance.

MODERNITY REVISITED: A NEW VIEW FROM AMERICAN WATER LEADERSHIP

Following Scott's (1998) arguments regarding 'high modernism', a number of authors have argued that water development in the nineteenth and twentieth centuries followed rationalist, bureaucratic, state-centered prescriptions for economic growth (i.e. Bakker, 2010; Molle, 2009). Often identified with a 'hydraulic mission', high modernism is intended to capture how the standardisation of water for national programs increased supply through infrastructure investments (i.e. irrigation works, hydroelectric dams) and governed water through the 'objective' lens of the hydrologic sciences (Molle et al., 2009). Swyngedouw (1999) situates this mission within modernity by mobilising Latour's (1993) ideas (among others) regarding the attempt to purify 'society' from 'nature'. These and like accounts, which suppose a nature/society dichotomy permeates modernity's state centered water programs (for an overview see Bakker, 2010), only partially capture water-use decisions in international contexts (see Blatter et al., 2001). Given the close connection between 'high modernism' and the nation-state it is therefore worth considering why this is so.

Modernity is often situated as a response to Enlightenment mind-body dualisms and the subsequent Kantian (2003) solution that gave a powerful new framework for understanding how the transcendental conditions of the knowing subject united reason with experience (i.e. Latour, 1993; Taylor, 2007; Habermas, 1987). As Heidegger, (1961: 28) describes, this gave rise to '[t]hat period we call modern…defined by the fact that man becomes the center and measure of all beings. Man is the *subjectum*, that which lies at the bottom of all beings, that is, in modern terms, at the bottom of all objectification and representation.' With humans – usually men – at the centre of a larger project for emancipating the subject from Enlightenment metaphysics, Gregory (2001) argues that water lost its plural ontological relations (i.e. healing waters, holy waters) through gradual expansion of positivist science and the mathematical equations of hydrology. The attraction of this view may reside in the positivist and pragmatist thinkers of the late nineteenth and early twentieth century who followed Ernst Mach's (1886) neutral monism, which suggested that matter was neither mental nor material, but rather occupied a neutral position. This view was marshalled by William James (1904), Ludwig Wittgenstein (2001), Rudolf Carnap and eventually Bertrand Russell not only to avoid the mind-body problem, but to eliminate the 'subject' as a mediator of the mind-body relationship under a general logic for science and psychology (cf. Banks,

2010). If early American water leadership had subscribed to neutral monism, or positivism more broadly, it would be plausible that the rendering of water as a 'resource' was congruent with broader divisions that separated humans from the 'neutral stuff' of nature (i.e. Zimmerman, 1933). However, this is not the case. And while versions of the former view are popular, an alternate can be developed in the context of the stated perspectives of some of the early American water management leadership at the turn of the twentieth century. In fact, key water policy architects in the US, Major John Wesley Powell and W.J. McGee, promoted and in many ways instantiated a different model than that claimed in accounts of modernity. For Powell and McGee, the subject was inextricably bound up with water itself based on: (1) a version of communal evolution (now disproved), (2) the overcoming of environmental determinism via techno-science and, (3) utilitarianism.

Communal evolution

When McGee declared water a 'resource' he was Secretary of the US Inland Waterways Commission, a coalition of federal agencies tasked to coordinate national resource planning (the agencies were the: Bureau of Soils, Forest Service, Reclamation Service, Bureau of Corporations and Army Corps of Engineers) (Westcoat, 2000). Officially the secretary McGee was, 'the trusted and effective adviser in every branch of the Commission's work' (Pinchot, 1998: 359). In part, McGee was afforded this position through his tutelage under Major John Wesley Powell, his long-time friend and supervisor at the US Geological Survey and the Bureau of Ethnology (Cross, 1953). Powell and McGee rejected the autonomous subject of the Enlightenment in favour of a 'collective unit' or communal subject (hereafter Subject), and explained differences in rationality among groups through deterministic beliefs about the effects of the environment on the capacities of human reasoning (McGee, 1899). For instance, both men repeatedly made homological arguments using the morphological characteristics of European civilisations (i.e. brain size) to establish superiority over 'savage' and 'barbarian' groups (Powell, 1888a; McGee, 1899; 1901).

While criticised by other anthropologists (i.e. Boas, 1913), Powell (1888b) and McGee (1899) considered western civilisation as the zenith of evolution based on its successful adaptation to, and progressive control over, nature. Their view rejected social Darwinism (i.e. the view that competition among societies legitimated domination) but retained communal interpretations of Darwinian evolution wherein superior control over nature was a sign of evolutionary progress. Such progress provided normative justification for pursuing courses of development that emerged out of the most advanced community's set of beliefs and practices. In this case, European versions of rationality, political models of organisation (i.e. the state) and property ownership.

Although ignored in contemporary accounts (i.e. deBuys, 2004), Powell's philosophy was laid out in *Truth and Error; or the Science of Intellection*, where he argued that 'every particle of matter has consciousness' (2009: 14) and that as the complexity of organisms increased so did the emergent degrees of intellectual capacity. Powell's attempt to overcome the mind-body dualism was not well received philosophically (see Logan, 1899) but McGee (1894, 1897) likewise argued that the 'earth-stuff' is both physical and mental and that, in combination with natural selection, has led to intellectual capacity that increases in lockstep with complexity. Viewed in tandem with a communal view towards evolution, the most complex societies represented a higher level of evolutionary progress and, through science and technology, could improve upon the haphazard evolution of nature (McGee, 1901; Powell, 1888b). McGee (1894: 28) articulated the corresponding duty regarding the role of the Subject *as part of nature* as follows:

> In a like manner, mankind, offspring of mother earth, cradled and nursed through helpless infancy by things earthly, has been brought well toward maturity, and like the individual man, he is repaying the debt unconsciously assumed at the birth of his kind by transforming the face of nature, by making all things better than they were before, by aiding the good and destroying the bad among animals and plants, and by protecting the aged earth from the ravages of time and failing strength, even as the child protects his fleshly mother.

Environmental determinism

Powell and McGee deployed their understanding of communal evolution as the basis for measuring social progress. Therein, the Subject controls and improves upon nature and thereby enables higher forms of reasoning as part of directing evolutionary progress. As McGee (1909: 37; emphasis added) wrote, 'More than all else, the course of nature has come to be investigated *in order that* it may be re-distributed along lines contributing to human welfare.' The tools for reordering nature in service to human welfare were scientific, technical and institutional. These tools manifested 'progress' by virtue of their utility in controlling nature for the ends of civilisation and McGee (1911) believed that, ultimately, the project of conquering nature depended on a quantitative perspective that could accord all water resources their highest value.

While control over nature freed the Subject from the determining limits of nature, securing water in the communal institutions of advanced societies stayed the course of human progress. Worster (2003) argues that Powell promoted 'watershed democracy' through direct citizen participation, an idea supported by Powell's (1899) contention that representational government subverted 'pure' democracy. However, Worster's (2003) view does not address the environmental determinism that underlay Powell's ethnocentric beliefs that western civilisation provided the evolutionary model for community

institutions (Powell, 1888a,b). In this respect, Powell argued public water ownership should be embedded in state constitutions (see also Worster, 2003) while McGee took the argument further by arguing that the community should be construed as the state itself. This communitarian basis for water governance led McGee (1911: 822, original emphasis) to reinforce what he considered affirmed in American water law as the foundation of natural equity: '…the incontrovertible proposition—now become axiomatic—that *all the water belongs to all the people*'. This proposition was basic for McGee because water was the predicate for all industrial and economic activity. This led him to search for ways to value water across all domains and, eventually, to utilitarianism.

Utilitarianism

In typical accounts of environmental ethics, Powell and McGee play bit parts (if any) in the debates between Gifford Pinchot's 'wise use' philosophy and John Muir's protectionism. Yet by Pinchot's (1998: 326) own account, it was McGee who convinced him of the need to extend utilitarianism from the 'greatest good to the greatest number' to that 'for the longest time'. Further, Pinchot (1998: 359) states plainly that McGee was the 'scientific brains of the early conservation movement'. In both respects, McGee's conclusion was that the government should manage water (indeed all natural resources) since its permanence could vouchsafe long-term goods. As an exemplar, McGee accords well with Blackbourn's (2006) account of Germany's 'conquest of nature' wherein the symbolic meaning(s) associated with interventions in the waterscape were constitutive of modern social identities in the nation-state. To wit, McGee (1911: 817) wrote that,

> As the prime necessary of life – the ultimate basis of existence for each of the individuals united in the nation – the water of the country is, under that leading principle of our national existence that all men are equally entitled to life, liberty and the pursuit of happiness, the common and indivisible possession of all – a possession in equity inalienable and indefeasible since no constituent of the nation could alienate or divest himself of his share without surrendering his right to life and so weakening the nation.

McGee did not shy from valuing water according to an aggregate state-as-community model, such as when he calculated the value of US property by replacing the gold standard with the ten-year estimated rainfall needed for a renewable supply; 'Reckoned in this way the value of the water reserve may be put at $150,000,000,000 in gross, *i.e.* $3 per acre-foot' (McGee, 1911: 823). McGee's consolidation of economic and ethical values *within* physical water worked hand-in-hand with the scientific techniques that allowed water to be quantified. In this key respect, ethics and science did not eliminate water's multiple ontological orders; rather, it deployed water to account for all expressions of value. As such, McGee saw control over water as the Subject taking

his [sic] proper place in nature. Interestingly, this led McGee (1911: 818) to enumerate the duties of governance in terms virtually synonymous with contemporary calls for subsidiarity:

> …it follows that the inherently progressive development in the use of water attending the natural growth and orderly development of the people can best be fostered by combining individual and institutional agency in the highest practicable degree – *i.e.*, by effective cooperation among individuals and both business and civic organisations, including corporations, communities, municipalities, states and federal agencies.

The ethic of modernity

Why do the philosophies of Powell and McGee matter in a broader assessment of modernity and water? There are several reasons that show how the declaration of water as a 'resource' came bundled with a richer normative heritage than accounts working out of the previously mentioned 'high modernism' (cf. Scott, 1998). To begin, it is worthwhile attending to the claim that declaring water a 'resource' was an instance of neutralising water on the latter half of the society/nature distinction. As Powell and McGee demonstrate, water was not part of this sort of divorce but was seen as a having a special status as the basis for communities (i.e. states) and their evolutionary progress. Wolf (2008) has remarked similarly, but with respect to international water agreements, where standard frameworks for explaining state rationality premised on mind-body/society-nature distinctions fail to account for the ethical and spiritual bases upon which many cooperative exercises are premised.

Second, the actual influence of McGee's utilitarianism in the US water experience has been detailed historically (Feldman, 1995) and the close connection between McGee and Powell warrants consideration for how both men influenced the water ethic of modernity. Interestingly, the 'hydraulic mission' tends to not explain normative legitimacy of water governance – save to preserve bureaucracies of power – even though criticisms of water management focus on how its utilitarian basis is often directly tied to the model of resource development supporting the nation-state (Blatter and Ingram, 2001; Whiteley et al., 2008). As detailed by Feldman (1995; 2007), the value orientation of the state apparatus incorporated the full development of hydrologic potential for economic and social welfare under Conservation Era policies in the US and, later, post-Keynesian political economy. And while this development path is often linked to those of other western nations like Spain (Swyngedouw, 1999) and Germany (Molle et al., 2009), the tension between western and non-western understandings of how rights and obligations fit with communal institutions can be given historical form once situated within the broader historical philosophy of the US experience. This allows for clearer connections

of institutional norms to emerging trends in water governance (covered further below).

Finally, by situating the western, techno-scientific norms of modernity, we gain insight into ethical tensions that arise when western techniques of 'modernisation' are applied in non-western contexts with different water governance norms, such as in Iran (Balali et al., 2009; Foltz, 2002). As such, whereas theories premised on a nature/society divide argue that water has carried multiple social meanings throughout modernity, there exist deeper conflicts between the specific ethical, spiritual and communal meanings informing the notion that water is a 'resource' and its fit with alternate ways of ordering the world. Recognising these conflicts helps to explain the recent turn in the literature on water governance towards 'water ethics' as a means to navigate the outcomes of state-led interventions while seeking new forms of legal and moral legitimacy in recent trends towards shared governance.

WATER ETHICS: WHY DOES A NEW VIEW OF MODERNITY MATTER FOR GOVERNANCE?

Water's declaration as a 'resource' was part of a broader social, scientific and normative philosophy. In application, this vision legitimated a management paradigm now identified as inadequate for, and indeed contributing to, contemporary water problems (Postel, 1992; Gleick, 2000). This recognition has motivated explicit considerations of ethics alongside social, institutional and scientific issues in water governance (Brown and Schmidt, 2010; Chamberlain, 2008; Whiteley et al., 2008; Postel and Richter, 2003). This section considers two normative sources – environmental philosophy and law – that have framed shifts away from state-oriented models of governing water and towards decentralised frameworks. The rationale for treating water ethics in these terms reflects how various sources of this literature are situated. For instance, Postel's (1992) seminal arguments for a new water ethic employs environmental philosophy by interning Leopoldian (1966) ideas that governance affects interdependent social and ecological communities. Alternatively, legal scholars have argued that a water ethic is distinct from environmental ethics due to the long co-evolution of myths, legal mores and social customs affecting water and which encompass broader suite of concerns than just those of moral value (West, 2007). These perspectives are not mutually exclusive, yet their emphases are worth treating distinctly in order to help clarify how each assembles other normative resources (i.e. economics) as part of water governance exercises.

Environmental philosophy

Philosophic arguments for a new water ethic often begin by identifying water as a constitutional need for individual lives and the ecological conditions upon which life depends and then connecting actions that have the potential to negatively affect individual lives, or the conditions upon which life projects are predicated, to their moral dimensions. In historical context, McGee's role in establishing utilitarianism in Conservation Era policies has perhaps not received significant enough attention. However, Feldman's (1995) work has traced how his version of utilitarianism has subsequently affected US water policy. Two strategies stand out. The first was a bureaucratic attempt to control water at regional or national scales. The second was an attempt to increase utility through market mechanisms. These dual strategies highlight a long-standing tension in international water governance between rational planning by government versus shifts towards privatisation (Delli Priscoli, 1996). As with other critiques of state-led resource planning, economists rightly argue that governments often have not yet adequately prioritised efficiency, which has led to excessive water use and/or waste (Anderson and Leal, 2001). This view is often challenged by noting that if economic efficiency implies individual title, then private transactions are out of step with the communal foundation for many legal regimes governing water rights (Sax, 1994). Hence, individual versus collective strategies for increasing utility require careful articulation of different types of economic value (Hanemann, 2006) and a robust normative basis for decisions with complex regulatory regimes (Harremoës, 2002). This type of debate has a longstanding history, but it also begs two questions. First, what are society's values regarding water? Second, how does McGee's communitarian solution bear on this debate?

Social psychologists in Australia initiated a series of studies using value frameworks from environmental philosophy to ascertain values associated with water allocation, planning and fairness (Syme and Nancarrow, 1996). Their findings suggest individuals prioritise water values in the following order: the community's right to have a say in allocation; natural rights for the environment; procedural fairness; situational criteria rather than general rules; an eschewal of using only economic values for water sharing; and a view of water allocation as needing to maximise community economic income and market freedom (Syme et al., 1999). As this list suggests, the attempt to integrate ethics and economics under a common metric has been difficult operationally (Syme et al., 2008). However, one difficulty with these studies is the presumption that ascertaining the level of agreement regarding ethical principles is symmetrical with how tradeoffs occur when values compete, or even conflict, in practice. As such, the attempt to find a common currency regarding water's value presumes a type of monism wherein values are seen as being comprised of, or otherwise reducible to, one type.

The attractiveness of a monist view is the supposition that once we have settled on the relevant value domain, we have the potential for reaching impartial decisions. Armstrong (2009) holds such a view when he assumes an intrinsic value as the basis for a water ethic. But there are at least three unattended difficulties with Armstrong's view. First, it is circular to stipulate an intrinsic value for water to *justify* an argument regarding what values inform a sound water ethic. Second, there may be elements of intrinsic value that people disagree on – such as how to determine what it as about water (i.e. its properties, functions or role in human flourishing) that supply the basis for intrinsic value (cf. O'Neill, 1992). Third, such an approach bears the burden of demonstrating how water's manifold symbolic, functional and sustaining roles in social-ecological systems are linked with the 'natural' categories of value articulated within a particular worldview (Berque, 2005). Such criticisms do not preclude an account of water's intrinsic value, but they do suggest a difficulty with defining a water ethic without acknowledging the co-evolution of social institutions alongside changes in socio-hydrological systems (Delli Priscoli, 2000).

In some cases, attempts to deploy environmental philosophy in arguments for a new water ethic have conflated models of decision making with ethical deliberation. For instance, Canadian water practitioners attempted to reduce water problems to issues of applied ethics – wherein correct action may be deduced from general principles (Matthews et al., 2007). However, complex scenarios routinely exceed the capacity of the applied ethics model for guiding inferences from general principles to specific cases (Hoffmaster and Hooker, 2009). In practical terms, applied ethics is problematic in water governance because what is typically needed is not a model for applying principles, but a way to judge which principles to employ in particular circumstances. For instance, choosing to emphasise water's economic value may be appropriate in some cases, but it may need to be adjusted to fit with particular cultural or religious beliefs, such as in the case of many Islamic regions (Al-awar et al., 2006). Likewise, while we actively manage water uses and users at various points in the water cycle, we affect relationships across *all* aspects of socioeconomic and ecological systems (Falkenmark and Folke, 2010).

The difficulties of ascertaining, and then accounting for, society's water values has led to calls for value pluralism in water ethics. Interestingly, and although the historical connection to McGee is not made, the first UNESCO report (Selborne, 2000) on the ethics of freshwater proposes a solution to the public-private debate through a communitarian ethic for balancing the traditional role of the state with the demands for equity in water management. However, McGee's (1911) solution was to interpret Oliver Wendell Holmes' judgment regarding the public nature of water in *Hudson Water Co. v. McCarter* (209 US 349, 1908) in utilitarian terms, wherein individual rights within human communities, including state economics, are grounded in the

fact that humans are physically and, *ipso facto*, politically, subject to water. In this light, the criticisms of environmental ethics for dealing with the emergent scales of water governance across jurisdictions and customs made in Delli Priscoli et al.'s (2004) introduction to UNESCO's 2004 *Water and Ethics* series prompts a reconsideration of the existing theory McGee offers to connect ethics and governance. This also bears on the first edited collection on water ethics and its organisation around governance themes rather than environmental philosophy (Llamas et al., 2009). And while recent UNESCO work (Macer, 2011) attempts a more integrated view of environmental philosophy and water governance, what is of interest here is how the step away from an emphasis on determining moral value in favor of a broader normative orientation for a water ethic, such as that enabled by law, has occurred largely without considering the broader normative tradition instantiated by Powell and McGee or its effects on recent trends towards shared water governance.

Law

Legal approaches to a water ethic may include issues of moral value but may also include issues of custom, treaties or other rights to property or person. Thus, a legal basis for a water ethic is distinct from arguments that extend moral norms to ground legal rights, such as in Postel's (2008) restated water ethic, which proceeds from Stone's (1974) arguments regarding legal standing for natural objects. In general, legal arguments for a new water ethic can be characterised in two ways that emphasise the positive (as opposed to strictly normative) role of law on water use practices. The first is *external* and reflects concerns that law has failed to keep pace with growing empirical knowledge of hydrological systems (Butler, 2000). The second is *internal* and focuses on the lack of legal mechanisms that ensures other rights – often couched in terms of human rights (Bluemel, 2004) – may be discharged given the current or future trends in water governance.

The external critique argues that legal doctrines are couched in larger narratives that may exclude relevant governance considerations. This, as Rose (1990) demonstrates, reveals a disparity between the theory of how decisions are made and the history of actual decisions. For instance, the common presumption is that regulations are necessary because water is scarce, either in terms of availability, economic production and/or externalities, or demand. As scarcity increases, policies are needed to resolve conflicts, with the correlate being that in times of plenty (most often in the past) resources were plentiful and policies unneeded. One would therefore expect the law to become more restrictive as scarcity intensifies. Yet historically this is often not the case. As Benidickson (2007) shows, water law has often been instrumentalised and discursively framed in favour of less restrictive policies as in, for instance, wastewater policies in Great Britain, the United States and Canada. In these

jurisdictions, the doctrine of 'reasonable use' replaced riparian norms regarding no perturbations to the 'natural flow' of water in a gradual retreat from standardised (even if only *prima facie*) restrictions to water use as scarcity problems were produced as externalities of wastewater policies.

Benidickson's examples are germane to broader concerns regarding how a focus on water ethics requires revisiting the ways in which water law seeks a fit with changing ecological and social conditions. For instance, critics have argued that there remains a need to establish an empirical baseline for determining relevance, such as how instrumental assumptions in legal precedent fit with the requirements of aquatic ecosystems (Klug, 2002). As Butler (1986; 2000) argues, rethinking the ethical precepts buttressing regulatory rules, such as those governing American property law, require principles congruent with an adequate empirical account of water's role as both a predicate for, and sustaining aspect of, ecosystems and society. Likewise, changing social values also require ethical reflection when historical rights are converted and reinterpreted under new institutional orders (Freyfogle, 1996). For instance, the prior appropriation system (first in time – first in right) in western North America placed water within the sphere of public ownership, with rights being granted for use and not as private property so as to prevent capitalists from speculatively accumulating water rights (Schorr, 2005). As such, the arguments of some economists suggesting that prior appropriation was structured so as to increase efficiency and economic development (Anderson and Leal, 2001) need to be scrutinised for the fit of economic tools with broader social goals.

Apart from what the law excludes, a growing literature has also begun to examine the internal principles affecting legal decision making. From this perspective, which is often couched in terms of establishing a 'human right' to water, new governance norms require principles to ensure adequate water is available and accessible (Salman and McInerny-Lankford, 2004). These arguments often take a deontological point of view, where establishing a right implies a corresponding duty (usually for government) to adequately discharge legal obligations (Eckstein, 2010). However, there is no uniform mechanism for discharging such a right and, increasingly, various forms of water governance mix state control, market mechanisms and public-private partnerships (Bakker, 2010). As such, legal redefinitions of water, or the formalisation of customary claims in legal terms under new governance arrangements, are often criticised for 'dispossessing' groups of collective claims to water as part of neo-liberal governance programs, such as in Bolivia (Swyngedouw, 2005). In other cases, ecofeminists identify the historical, structural oppression of women, North American indigenous groups, or specific socio-economic classes (Gaard, 2001). In such cases, and to use research regarding women in South Asia as an example, the legal formalisation of existing water use practices may work in the favor of the dominant groups due to broader social practices and habits that reduce the influence of women in decision making (Zwarteveen and

Meinzen-Dick, 2001). As such, it is increasingly recognised that formal rights are embedded in broader and overlapping normative traditions upon which they depend for legitimacy, and which also must be confronted in the articulation and formalisation of water rights (Pradhan and Meinzen-Dick, 2003).

Water's special status, and the need for new institutional mechanisms in governance have led to some compromises between historical exigencies of the state-as-community and economic instruments. For instance, the European Union (2000: 1) established its Water Framework Directive for 'Community action' by stating that 'Water is not a commercial product like any other but, rather, a heritage which must be protected, defended and treated as such'. This sort of economic acknowledgement, but restraint from full economic valuation, is furthered by Tisdell's (2003) comparison of different water allocation doctrines against political theories of justice, such as Nozick's libertarianism, Rawlsian fairness and Bentham's utilitarianism. Likewise, Chamberlain (2008) surveyed how a broader water *ethos* of social norms and values legitimates particular ethical orientations for law and religion across Islamic, Judeo-Christian, Hindu and indigenous perspectives. A central ethical concern here is therefore confronting how legal changes, such as redefining water as private or public property, may be partial to specific communities for political or cultural reasons that fail to ensure duties are adequately discharged across the collective community that previous laws or informal arrangements had recognised (Dellapena, 2008). In this regard, squaring both internal and external demands on the law depends on what *kinds* of persons or communities are recognised as rights holders and on clarity regarding how rights classify different types of water and rights to them. It is here that a return to the considerations and resources of environmental philosophy can add clarity to the debate on water ethics and the shifts towards decentralised water governance.

4. CONCLUSION: TOWARDS AN ETHICS OF GOVERNANCE

The declaration of water as a 'resource' came replete with a governance philosophy that is not adequately captured by theoretical accounts premised on nature/society dualisms in modernity. The 'ethic of modernity' arose from attempts to order water according to a distinct vision of social evolution as 'progress' and provided normative legitimacy for the extension of western ideas of the state-as-community, property, law and governance to many non-western contexts. As such, a reflexive response to modernity is not sufficient. Rather, a reflective, ethical response to the existing patterns of water governance is needed to reconfigure the basic categories through which water is understood in shared governance arrangements between groups with historical and contemporary views that order the world differently, such as those between western societies and aboriginals in the US and Canada, with respect to both ethics (Reynolds,

2003) and law (Matsui, 2009). Here we conclude by arguing that the rise of approaches to water governance based on shared responsibility, devolving management structures and inter-agency coordination should be understood as a reflective exercise regarding the basic ordering categories affecting the contemporary shift from 'government to governance'. To broaden the views that identify this shift as 'putative' (Norman and Bakker, 2009: 100), decentralised water governance may also be seen as normatively substantive because it must countenance less uniformity amongst, and increasingly encourage deliberation regarding, ethical values. Moreover, as the number of participants in water governance increases, ethical considerations are critical for assessing the respective roles of science, religion and law (Delli Priscoli, 2004). The upshot is that shared governance efforts require attending to how moral and legal norms condition: (1) Action and the use of knowledge in general (Lenoble and Maesschalck, 2003) and; (2) The identification of who 'counts' and constitutes an affected party in natural resource management (Reed et al., 2009). We suggest three implications for how attending to our water ethic may support shared governance.

First, a central insight of the water ethics discourse is that we cannot avoid taking an ethical position in water governance. The preeminent utilitarian ethic inaugurated by McGee suggested that the consequences of water use actions are the measure of success for a certain type of community. Yet the current shifts toward 'community-based governance' are neither consequentialist nor oriented only towards the state, and anthropological work in this vein increasingly emphasises the resonance regarding water's value across traditions that articulate these values through different social procedures in different rituals and customs (Shaw and Francis, 2008; Strang, 2004). Given the diversity of cultural communities supported by water, we should not expect any single 'water ethic' to be forthcoming. Rather, we should expect (and welcome) the multiplicity of views that forums for decentralised governance seek to support. Likewise, cultivating governance partnerships must work to find shared values that are not coincidental only with the relationships relevant to one set of political considerations, such as when 'watershed' governance is naturalised rather than viewed as part of larger social and political processes (Warner et al., 2008). Deploying existing networks for the purposes of effective governance, such as those of religious, civic and civil societies present one option for where coordinating values may be found regarding alternative conceptions of the relationships and obligations amongst subjects, communities and water. While the focus here centred legal and moral sources regarding water ethics, there is no need to delimit normative resources to only these options for specific cases. We have done so here primarily as a way to engage accounts of modernity.

Second, the water ethics discourse explicitly recognises that different governance constellations have the effect of legitimating certain normative positions while undermining others. In McGee the claim was explicit: control

over nature is the warrant for legitimacy. In decentralised governance, however, the recognition and politics of informal partnerships – whether through mechanisms such as a watershed steering committee or 'river-keeping groups' – needs to be complemented with an ethical basis robust enough to establish shared decision-making procedures; the vision that such arrangements aim to achieve; and a formal and informal institutional environment that can support it. A third and closely related concern is with water management, which is typically defined in terms of actual decision making. Globally, there has been a strong push towards integrated water resources management (IWRM) as a strategy for meeting water demands in industrial and post-industrial societies. Unfortunately, integration has been premised primarily on coordination through rational, objective principles for water governance (see Jeffrey and Geary, 2006). Yet considering the ethical claims embedded in water policies, it is clear that there is no value-neutral domain that provides a tidy context for integration. In this regard, there is a need for continued objection to claims that cultural and political differences over water policy are primarily 'rational' and not part of broader value sets and orderings of the world (Espelund, 1998). Further, there is a need to find frameworks that unite issues of ecosystem wellbeing with a view of both society and nature under a new narrative that recognises their highly connected and complex interactions (i.e. Parkes et al., 2010). In this regard, the need for an integration of science, society and water remains pressing, and lessons may be learned from the philosophical efforts (though not necessarily the content) of early American water leaders.

This paper endeavoured to show how values were an essential component of the views of the 'water resource' of American water leadership at the turn of the twentieth century rather than a value neutral base as often proposed in accounts of modernity, and to attend to ethical issues affecting the contemporary shift to decentralised water governance. The growing 'water ethics' literature attempts to bridge these concerns and to order the overlapping spheres of normative legitimacy in water governance using different orientations from environmental philosophy and law. Regardless of approach, the shift towards decentralised governance raises anew questions of what kinds of subjects or communities make claims to water and what sorts of rights affect governance. As such, developing water ethics implies not only discontent with the norms inherited from policies past but an opportunity to recover aspects of our heritage that may provide leverage for improved governance procedures and outcomes. Such a view holds not only for the American case, but for any where arresting and mitigating modern development paths is necessary for achieving equitable water governance.

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